REMARKS

Claims 1-26 continue to be the pending claims in the application; claims 11-26 have been withdrawn from consideration. Reconsideration of the application in light of the remarks which follow is respectfully requested.

Claim Rejections Under 35 U.S.C. §103

Claims 1-10 stand rejected under 35 U.S.C §103(a) as being allegedly unpatentable over MUKAI et al., U.S. Patent No. 6,037,418. The Examiner contends that the prior art of MUKAI et al. discloses resin reinforced elastomeric compositions employing particulate olefin resins dispersed in diene rubber compositions. The Examiner alleges that it would have been *prima facie* obvious to formulate the compositions of the presently claimed invention looking to MUKAI et al. Applicants respectfully traverse the grounds of rejection.

THE DISCLOSURE OF MUKAI DOES NOT TEACH OR SUGGEST THE CLAIMED INVENTION

1. The Invention

The present invention relates to a rubber composition comprising a diene elastomer, particles of an α-olefinic thermoplastic polymer, a reinforcing filler and sulfur. The pending claims state that the polymer particles have a melting point of at least 150°C and that the mean size by weight of the particles is between 30 μm and 500 μm. In addition, the rubber composition, as claimed, requires the inclusion of a filler in the range of greater than 60 phr and sulfur at a level of 3 to 8 phr. The rubber composition of the present invention has high stiffness and is usable in a tire safety support, *see* page 1, line 2; and page 12, lines 11-14, not in a tire tread.

2. Cited Prior Art

MUKAI et al. teaches a resin-reinforced elastomer preferably useful in the tread of a tire (*see* Abstract; column 1, line 16; column 2, line 38; column 8, lines 25-27, and line 34; column 9, line 64-67; claim 8). The MUKAI et al. elastomer is principally two components, a rubber and polyolefin wherein the polyolefin is a fine particle polyolefin having a average particle size of at most 1 μm. *See* MUKAI et al. Abstract; column 2, lines 20-21; column 5, lines 50-52; column 8, lines 61-62; the Examples; Table 2; Table 3, and the Claims. The MUKAI et al. polyolefin has a melting point in the range of 80° C to 250°C. (column 2, lines 60-61). It is well known in the art that fine particle olefins have characteristics permitting their utilization as reinforcing fillers in the tread of a tire.

MUKAI et al. also discloses that the resin-reinforced elastomer may be blended with another filler, such as carbon black. The working Examples list a level of carbon black which does not exceed 55 phr (*see* Table 2 with 40 phr carbon black and Table 3). In addition, the level of sulfur is 1.5 phr or 2 phr (*see* Tables 2-3). According to MUKAI et al., the resin-reinforced elastomer is "excellent in modulus, strength, wear resistance, fatigue resistance and the like and has low density" and accordingly is useful as a tread of a tire. *See*, column 1, lines 11-16.

3. There Is No *Prime Facie* Case Of Obviousness

The MUKAI et al. reference does not support a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation in the cited references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of

success. Third, the combined references must teach or suggest all the claimed limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and must not be based on the applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ 2d 1438 (Fed. Cir. 1991); MPEP § 2142.

There is no motivation or suggestion in MUKAI et al. or knowledge generally available to the skilled artisan to modify the disclosed elastomer to make the claimed rubber composition having olefin particles with a mean size of between 30 μm to 500 μm. In fact, MUKAI et al. actually teaches away from the claimed invention by stating that the particle size of the olefin should be at most 1 μm.

A prior art reference must be considered in its entirety, including portions that teach away from the claimed invention. *See* M.P.E.P 2141.02, *see also W.L. Gore & Assoc., Inc. V. Garlock, Inc.,* 721, F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983), *cert. denied,* 469 U.S. 851 (1984). In addition, a *prima facia* case of obviousness is rebutted by a showing that the prior art reference teaches away from the claimed invention. *See In re Haruna*, 249 F.3d 1327, 1335, 58 U.S.P.Q.2d 1517 (Fed. Cir. 2001). A reference is said to teach away if a skilled artisan looking to the reference would have taken a different path than Applicant. *See Tec Air, Inc. V. Denso Manufacturing Michigan Inc.*, 192 F.3d 1353, 1360, 52 U.S.P.Q.2d 1294 (Fed. Cir. 1999). In addition, if a reference teaches away from the claimed invention, there is no suggestion or motivation to combine the reference with another source. *Id.* and M.P.E.P 2145.

There is nothing in MUKAI et al. to suggest that it would be desirable to utilize olefin particles having a size between 30 μm to 500 μm. On the contrary, MUKAI et al.

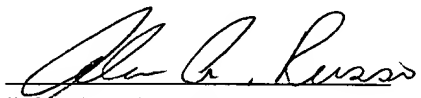
specifies that the particle size should be at most 1 μm.; and it is well known in the art that fine particles are desirable for use in the tread of a tire. In addition, MUKAI et al. provides no guidance for making rubber compositions having the desired characteristics for use in a tire safety support. Therefore, the skilled artisan would not have been motivated to modify MUKAI et al. to make the present invention.

Even assuming, *arguendo*, that the skilled artisan would have concluded that modifying the MUKAI et al. tire tread fine particle compositions with a larger particle size olefin might possibly result in a rubber composition useful in a tire safety support, the skilled artisan looking to MUKAI et al. still would not have found an adequate teaching to make the claimed invention. That is because the Applicants' amount of reinforcing filler is greater than 60 phr and the level of sulfur is from 3 to 8 phr. These levels exceed the levels taught by MUKAI et al. of not greater than 55 phr carbon black and not greater than 1.5-2 phr sulfur (*see* Tables 2-3).

Accordingly, MUKAI et al., either taken alone or in combination with knowledge generally known in the art, does not teach or suggest all the claim limitations of the present invention. For all the foregoing reasons, Applicants assert that MUKAI et al. does not support a *prima facia* case of obviousness. Therefore, Applicants respectfully request withdrawal of the rejection of the claims under 35 U.S.C. § 103(a).

In view of the foregoing remarks, favorable reconsideration and allowance of all pending claims is earnestly solicited. Applicants' undersigned attorneys may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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Enclosures

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